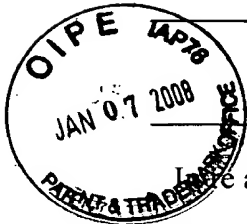


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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent application of: Christianson et al.

Attorney Docket No.: ACTUP008X1

Patent: 7,124,144 B2

Issued: October 17, 2006

Title: METHOD AND APPARATUS FOR
STORING SEMI-STRUCTURED DATA IN A
STRUCTURED MANNER

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as first-class mail on January 3, 2008 in an envelope addressed to the Commissioner for Patents, P.O. Box 1450 Alexandria, VA 22313-1450.

Signed: _____

Juan D. Petris

**REQUEST FOR CERTIFICATE OF CORRECTION
OF OFFICE MISTAKE
(35 U.S.C. §254, 37 CFR §1.322)**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450
Attn: Certificate of Correction

**Certificate
JAN 09 2008
of Correction**

Dear Sir:

Attached is Form PTO-1050 (Certificate of Correction) at least one copy of which is suitable for printing. The errors together with the exact page and line number where the errors are shown correctly in the application file are as follows:

SPECIFICATION:

1. Column 3, line 58, delete "6". This appears correctly in the patent application as filed on August 1, 2001, on page 6, paragraph 30, line 2.

2. Column 13, line 15, add --table that contains-- after the second instance of "the". This appears correctly in the patent application as filed on August 1, 2001, on page 21, paragraph 66, line 6

3. Column 13, line 16, add --four value rows for-- after the first instance of "the". This appears correctly in the patent application as filed on August 1, 2001, on page 21, paragraph 66, line 7.

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CLAIMS:

1. In line 17 of claim 18 (column 16, line 5) change "orgarnzation" to --organization--. This appears correctly in Amendment B as filed on December 22, 2005, on page 8, paragraph 4, line 11, as claim 40.

Patentee hereby requests expedited issuance of the Certificate of Correction because the error lies with the Office and because the error is clearly disclosed in the records of the Office. As required for expedited issuance, enclosed is documentation that unequivocally supports the patentee's assertion without needing reference to the patent file wrapper.

It is noted that the above-identified errors were printing errors that apparently occurred during the printing process. Accordingly, it is believed that no fees are due in connection with the filing of this Request for Certificate of Correction. However, if it is determined that any fees are due, the Commissioner is hereby authorized to charge such fees to Deposit Account 50-0388 (Order No. ACTUP008X1).

Respectfully submitted,
BEYER WEAVER LLP



Elise R. Heilbrunn
Registration No. 42,649

P.O. Box 70250
Oakland, CA 94612-0250
408-255-8001

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signals capable of being stored, transferred, combined, and otherwise manipulated through mechanical and electrical components of a digital system, and the term digital system include general purpose as well as special purpose data processing machines, systems, and the like, that are standalone, adjunct or embedded.

[0031] Various operations will be described as multiple discreet steps performed in turn in a manner that is most helpful in understanding the present invention, however, the order of description should not be construed as to imply that these operations are necessarily order dependent, in particular, the order the operations are presented. Furthermore, the phrase "in one embodiment" will be used repeatedly, however the phrase does not necessarily refer to the same embodiment, although it may.

[0032] Referring now to Figure 1, wherein a block diagram illustrating an overview of the data representation aspect of the present invention, in accordance with one embodiment. As illustrated, mapper 50 incorporated with the teachings of the present invention, is equipped to generate structured organization 52 to store semi structured data 54. Collaterally, mapper 50 also generates description 56 of how semi-structured data 54 are stored under structured organization 52. As will be described in more detail below, the collateral generation of description 56 advantageously enables mapper 50 to generate structured organization 52 in any one of a number of approaches. That is, under the present invention, unlike any of the prior art techniques, the generation of structured organization 52 is not bounded or fixed to one particular mapping approach.

[0033] Figures 2a-2b illustrate semi-structured data and its logical representation, in accordance with one embodiment. As illustrated, semi-structured data 54' includes a number of entities or data elements, each delineated by a pair of tags, e.g. entity A by tags <entity A> and </entity A>, entity B by tags <entity B> and </entity B>, and so forth. Some entities, like entities F and H have multiple instantiations. The entities/instantiations have an hierarchical relationship to each other; and may be logically represented by tree structure 60, having

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"Finance" &&

EMPLOYEES.BLDG = BUILDINGDOCS.BUILDING &&
EMPLOYEES.OFFICE = BUILDINGDOCS.OFFICE

[0066] In one embodiment, the mapping table also contains the value rows corresponding to each leaf node, that is a node that is not a parent node. The leaf nodes of Figure 15 are nodes 1503, 1506, 1507, and 1509. In one embodiment, each value row identifies an XML element or attribute, the table in the legacy database that contains an element, and the name of the column in the table that contains the value for that element or attribute. Table 6 illustrates the four value rows for the mapping associated with Tables 1-3 and Table 4.

TABLE 6

Row	A/E	Name	Table	Key	Value
9	A	name	DEPARTMENTS	Name	Name
10	E	first	EMPLOYEES	Fname	FName
11	E	last	EMPLOYEES	Lname	LName
12	A	phone	BUILDINGSDOCS	Phone	Phone

[0067] The "A/E" column identifies whether the row is an attribute or element; the "Name" column identifies the name of the element and attributes; the "Table" column identifies the legacy table; the "Key" column identifies the key for that table; and the "Value" column identifies the name of the column where the value is stored.

Epilogue

[0068] While the present invention has been described in terms of the above-illustrated embodiments, those skilled in the art will recognize that the invention is not limited to the embodiments described. The present invention can be practiced with modification and alteration within the spirit and scope of the appended claims. The description is thus to be regarded as illustrative instead of restrictive on the present invention.

[c37] 37. (Cancelled)

[c38] 38. (Previously Amended) The method of claim 36, wherein said collateral generation of a description further comprises generating for each of a selected one or ones of said descriptive entries a context qualifier for at least a selected one of the parent and the child node.

[c39] 39. (Previously Amended) The method of claim 36, wherein said generation of a semi-structured data organization comprises creating an extensible mark-up language (XML) data structure for a collection of relational tables.

[c40] 40. (Previously Amended) An apparatus comprising:

[c41] a storage medium having stored therein a plurality of programming instructions designed to generate a semi-structured data organization for a collection of structured data, when executed, and to collaterally generate a description of correspondence between the semi-structured data organization and the structured data; and

[c42] a processor coupled to the storage medium to execute the programming instructions, wherein the programming instructions are designed to generate the description by generating a description table having a plurality of descriptive entries, with each descriptive entry identifying a first and a second storage column of a storage table of the structured data for a parent and a child node of a parent and child node pair of the generated semi-structured data organization.

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[c43] 41. (Cancelled)

[c44] 42. (Previously Amended) The apparatus of claim 40, wherein said programming instructions are further designed to generate for each of a selected one or ones

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(Also Form PT-1050)

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : 7,124,144 B2
DATED : October 17, 2006
INVENTOR(S) : Christianson et al.

Page 1 of 1

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

In the Specification:

Column 3, line 58, delete "6".

Column 13, line 15, add --table that contains-- after the second instance of "the".

Column 13, line 16, add --four value rows for-- after the first instance of "the".

In the Claims:

In line 17 of claim 18 (column 16, line 5) change "orgarnzation" to --organization--.

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MAILING ADDRESS OF SENDER:

Elise R. Heilbrunn
BEYER WEAVER LLP
P.O. Box 70250
Oakland, CA 94612-0250

PATENT NO. 7,124,144 B2

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